

REMARKS

This is in response to the Office Action of February 14, 2008. Claims 2-4 and 9-16 are pending in the application. Claims 2 and 14 are amended based upon disclosure in Example 10 on page 31 of the specification. No new matter is introduced by this Amendment. Entry of this Amendment – in order to place the application into condition for allowance or into better condition for appeal – is earnestly solicited.

Rejections over prior art

Claims 2-4 and 9-16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by, or under 35 U.S.C. § 103(a) as being unpatentable over, DE 24 49 085 to Hoeckemeyer et al. (“Hoeckemeyer”). Office Action, page 2.

The Examiner contends that the experimental results which were presented in the November 2, 2007 ‘Declaration under 37 CFR 1.132’ of Kenji Yamamoto “do not show unobviousness in using a combination of an Si-H siloxane and a methylethoxy polysiloxane over that which is shown in the working examples, using an Si-H siloxane in its own.”

Applicants respectfully traverse, for the following reason. In the experimental data, Composition (I) – prepared by mixing the silane (G) with water prior to mixing with other components – achieved superior oil repellency as compared to Composition (II) – prepared by mixing all the components at the same time. In Composition (II), the silane (G) is distributed more in the silicone phase than in the aqueous phase because of its higher affinity to a silicone than to water. In Composition (I), in contrast, there is no silicone component, so that the silane (G) is well hydrolyzed and has silanol (SiOH) groups. The hydrolyzed silane (G) is miscible

with poly(vinyl alcohol) ("PVA") dissolved in water to anchor PVA to a substrate, leading to superior oil repellency.

Hoeckemeyer teaches only to use methylethoxy polysiloxane as a crosslinker. Hoeckemeyer's methylethoxy polysiloxane is different from the present component (G) in that it does not have silanol groups. The advantages of the present invention are made possible by the presence of silanol groups in Applicants' compositions.

Moreover, Hoeckemeyer neither describes nor suggests mixing the additional crosslinker (methylethoxy polysiloxane) separately from the crosslinker (methyl hydrogen polysiloxane), let alone mixing methylethoxy polysiloxane with water prior to mixing it with methyl hydrogen polysiloxane. Accordingly, methylethoxy polysiloxane would be added as a mixture with the crosslinker, which will result in a situation similar to that in Composition (II) where the terminal ethoxy groups being not hydrolyzed into silanol groups. Consequently, high oil repellency as provided by the present composition would not be derived from the Hoeckemeyer technology.

Furthermore, Hoeckemeyer teaches the use of methylethoxy polysiloxane units having the formula $[\text{OSi}(\text{OC}_2\text{H}_5)\text{CH}_3]_m$, with m being 3 to 5. Hoeckemeyer teaches pentamers to heptamers with terminal SiO units. In contrast to this teaching, the presently claimed composition recites a silanol dimer ("a condensate of ... a silanol with a degree of polymerization of 2").

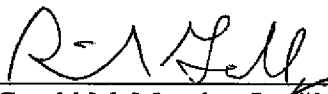
For the reasons discussed above, the present invention is not anticipated by, and is unobvious over, the Hoeckemeyer disclosure. Withdrawal of the rejection of claims 2-4 and 9-16 in their current form is earnestly solicited, as is passage of this application to Issue.

Contact information

The Examiner is invited to contact Richard Gallagher (Reg. No. 28,781) at (703) 205-8008 with any questions pertaining to this application.

Respectfully submitted,

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